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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/005,542 | 12/03/2001 | Dean E. Thorson | 66247 | 9218 |
| 22917 | 7590 | 09/02/2005 | | |
| MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196 | | | EXAMINER LIU, JONATHAN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2663 | |

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/005,542 | Applicant(s) THORSON ET AL. | |
| | Examiner Jonathan Liou | Art Unit 2663 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,7,10,16 is/are rejected.
- 7) ☒ Claim(s) 2-6,8,9,11-15,17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/03/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 3-6, 12-15 are objected to because of the following informalities: In claims 3-6 and 12-15, applicant uses (e1) through (e11); however, (e4) does not appear in the claims. The examiner suggests renumbering the sequence of (e1) through (e11). Appropriate correction is required.

Allowable Subject Matter

2. Claims 2-6, 8-9, 11-15, and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 10 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. As per claims 10 and 16, the term "*computer program product*" in the line 1 of the claims, is not clear to the examiner whether the applicant means the software program or the computer program system.

6. As per claims 10 and 16, the phrase "*a medium for embodying a computer program for input to a computer; and a computer program embodied in the medium for causing the computer to perform the following function*" is not clear to the examiner.

Art Unit: 2663

The examiner could not understand how a computer program product pro se could include a medium since the applicant does not specify what a computer program product is. In addition, a computer program needs a processor to execute.

7. The examiner suggest the applicant to specify what a computer program product is, and replace the phrase "*a medium for embodying a computer program for input to a computer; and a computer program embodied in the medium for causing the computer to perform the following functions*" to "*a computer executable program embodied in the computer readable medium for causing the computer to perform the following functions*" or proper and clear claims description needs in order for one having ordinary skill in the art to fully understand and use the applicant's invention.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,751,761 to Gilhousen.

10. As per claim 1 and 10, Gilhousen discloses a method of assigning Walsh codes (see col 7, lines 13-24, and col 8, lines 40-42.)

Comprising the steps of:

Art Unit: 2663

(a) receiving as input a status vector for a Walsh code system of length 2^n ;
(Gilhousen teaches that the Walsh code sequence is received as input (col. 15, lines 40-45), and he also teaches those Walsh code sequences could be the length 2^n (col. 7, lines 14-27.) Further, the Walsh code is form of vector as shown in Fig. 2 and col 7, lines 35-59, and it could be interpreted as status vector as claimed.)

(b) creating a new status vector for a selected Walsh code length of $j=2^{n-k}$ from the status vector. (Gilhousen shows a new status vectors could be created (see col 7, lines 35-59 and col 48-53.) The length could be vary with any sequences of power of 2 (col 7, lines 35-59.) It could be interpreted as $j=2^{n-k}$ as claimed because while $n=1$, $k=0$, j is equal to 1; while $n=2$, $k=1$, j is equal to 2; while $n=4$, $k=2$, j is equal to 4; and so on (refer to the equations in col 7, lines 35-59))

(c) creating a search mask for the selected Walsh code length of j ;

(d) creating a search sequence fro the selected Walsh code length of j :

(Gilhousen teaches when it is desired to initiate an additional code assignment, a set of potentially assignable codes is identified by searching the list. (see col 11-12, lines 63-9.) This function as taught by Gilhousen could be interpreted as a search mask as claimed. Since it teaches the length table within the cell controller specifying the codes suitable for allocation to channels operative at various data rates, therefore, the length could be j . In addition, table I shows the assignment list table. (col 11-12, 64-65.) By searching the list of Table I, the search sequence for the selected Walsh code could also have length of j .)

(e) searching the search sequence with the search mask to find the next available Walsh code. **(Gilhousen teaches the list would be searched for an available code having a chip length appropriate for the data rate of the requesting channel. (col 12, lines 31-33.))**

11. As per claim 7, Gilhousen teaches a method of tracking an assignment status of each Walsh in a Walsh code system **(Gilhousen teaches each Walsh code sequence is identified by a Code Label, X/Y, wherein Y represents the length of the code and X denotes a code number (col 10, lines 53-55.))** The method comprises the step of:

(a) receiving as input a status vector, an assignment indicator, a Walsh code parameter M, and a Walsh code length parameter j wherein M and j are positive integers; **(Gilhousen teaches that the Walsh code sequence is received as input (col. 15, lines 40-45), Walsh assignment code Label with a Walsh code number X and a Walsh code length Y (col 10, lines 53-55.) Table I shows X/Y are positive integers.)**

(b) retrieving a bit mask [M, j]; **(Gilhousen teaches assigning X/Y to channels (col 11, lines 29-62.))**

(c) updating the status vector as a function of the Walsh code parameter M, the assignment indicator, and the bit mask [M, j]. **(Gilhousen teaches the code could be simultaneously altered to identify other mobile channels. (col 10, lines 22-32.))**

Art Unit: 2663

New status vector could be as a function of the Walsh code number, the assignment code, and bit mask X/Y. (**Table I, and col 10-11, lines 48-62.**)

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,751,761 to Gilhousen, and in view of U.S. Pub. 20020146059 to Kodani et al.

14. As per claims 10, Gilhousen teaches the functions (a) through (e) as taught for claim rejection 1 above in the office action. He does not specifically teach a computer executable program embodied in the medium for causing the computer to perform those functions. Nevertheless, Kodani et al. teach the software system in the control unit (Fig. 1, Kodani et al.). The software system includes Resource Managing sect., which has Walsh-code managing sect. The Walsh code managing sect. Serves to function to control order of assignments of Walsh code (sec [0061]-sec [0062], Kodani et al.)

Since Kodani et al. teaches the software system to perform the Walsh code managing function and Gilhousen teaches the functions of assigning the Walsh code, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the computer executable program to perform the structure of Gilhousen in view of Kodani et al. teaching because Gilhousen would require some kind

Art Unit: 2663

of computer system to operate his system. Moreover, Gilhousen teaches apparatus and system of control processor to assign the Walsh codes (col 12 –13, line 66-46, Gilhousen.)

15. As per claim 16, the same basis and rationale for claim rejections as applied to claims 7 and 10.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Liou whose telephone number is 571-272-8136. The examiner can normally be reached on 8:00AM ~ 5:00PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jonathan Liou

08/16/2005


RICKY NGO
PRIMARY EXAMINER

8/29/05